



Log No. **21-GP1-026 Rev 3**  
**6/24/21**

STATE OF WASHINGTON

## STATE BUILDING CODE COUNCIL

### Washington State Energy Code Development Standard Energy Code Proposal Form

Code being amended: ☒ Commercial Provisions ☐ Residential Provisions

Code Section # C405.2.4

Brief Description: In WSEC 2018 daylight harvesting controls are required based on a certain qty of fixtures (>2) located in the daylight zone(s) regardless of their actual energy consumption.

(Example 1: combined pri/sec daylight zones include qty 10 mini-can lights at 10W each = 100W that would require daylight harvesting per WSEC)

(Example 2: combined pri/sec daylight zones include qty 2 high-powered linear luminaires at 130W each = 260W; that would not require daylight harvesting per WSEC)

In order to improve actual energy savings; the triggering of daylight harvesting controls should be based on a wattage calculation regardless of luminaire qty. Other model energy codes all utilize wattage calculations for daylight harvesting requirements. I would propose the use of the most aggressive wattage calculations based on the latest ASHRAE standards of 75W/Pri and 150W/Pri+Sec.

Proposed code change text: (Copy the existing text from the Integrated Draft, linked above, and then use underline for new text and ~~strikeout~~ for text to be deleted.)

C405.2.~~4~~5 Daylight responsive controls. Daylight responsive controls complying with Section C405.2.~~4~~5.1

shall be provided to control the ~~lighting~~ general lighting within daylight zones in the following spaces:

~~1. Sidelit daylight zones as defined in Section C405.2.45.2 with more than two general lighting fixtures within the combined primary and secondary sidelit daylight zones.~~

~~2. Toplit daylight zones as defined in Section C405.2.45.3 with more than two general lighting fixtures within the daylight zone.~~

1. Spaces with a total of more than 75 watts of general lighting within primary sidelit daylight zones complying with Section C405.2.5.2

2. Spaces with a total of more than 150 watts of general lighting within the combined primary and secondary sidelit daylight zones complying with Section C405.2.5.2

3. Spaces with a total of more than 75 watts of general lighting within toplit daylight zones complying with Section C405.2.5.3

Exception: Daylight responsive controls are not required for the following:

1. Spaces in health care facilities where patient care is directly provided.

- ~~2. Lighting that is required to have specific application control in accordance with Section C405.2.5.~~
- ~~3.2. Sidelit daylight zones on the first floor above grade in Group A-2 and Group M occupancies.~~
- ~~4.3. Daylight zones where the total proposed lighting power density is less than 35 percent of the lighting power allowance per Section C405.45.2.~~

Code Section # C405.2.4.1

C405.2.45.1 Daylight responsive controls function. Where required, daylight responsive controls shall be provided within each space for control of lights in that space and shall comply with all of the following:

1. Lights in primary sidelit daylight zones shall be controlled independently of lights in secondary sidelit daylight zones in accordance with Section C405.2.45.2.

~~Exception: Spaces enclosed by walls or ceiling height partitions with no more than three general lighting fixtures may have combined daylight zone control of primary and secondary daylight zones provided uniform illumination can be achieved.~~

2. Lights in toplit daylight zones in accordance with Section C405.2.45.3 shall be controlled independently of lights in sidelit daylight zones in accordance with Section C405.2.45.2.

3. Daylight responsive controls within each space shall be configured so that they can be calibrated from within that space by authorized personnel.

4. Calibration mechanisms shall be in a location with ready access.

5. Daylight responsive controls shall dim lights continuously from full light output to 15 percent of full light output or lower.

6. Daylight responsive controls shall be configured to completely shut off all controlled lights in that zone.

- 5.7. When occupant sensor controls have reduced the lighting power to an unoccupied setpoint in accordance with Sections C405.2.1.2 through C405.2.1.4, daylight responsive controls shall continue to adjust electric light levels in response to available daylight but shall be configured to not increase the lighting power above the specified unoccupied setpoint.

- ~~6.8.~~ Lights in sidelit daylight zones in accordance with Section C405.2.45.2 facing different cardinal orientations (i.e., within 45 degrees of due north, east, south, west) shall be controlled independently of each other.

Exception: Up to ~~two light fixtures in each space~~ 75 watts of general lighting are permitted to be controlled together with lighting in a daylight zone facing a different cardinal orientation.

Purpose of code change: Improved accuracy of daylight harvesting control applications for increased energy savings

Your amendment must meet one of the following criteria. Select at least one:

- |  |  |
|--|--|
| <input type="checkbox"/> Addresses a critical life/safety need.  | <input checked="" type="checkbox"/> Consistency with state or federal regulations. |
| <input checked="" type="checkbox"/> The amendment clarifies the intent or application of the code.                                     | <input type="checkbox"/> Addresses a unique character of the state.                |
| <input checked="" type="checkbox"/> Addresses a specific state policy or statute.<br>(Note that energy conservation is a state policy) | <input type="checkbox"/> Corrects errors and omissions.                            |

Check the building types that would be impacted by your code change:

- |  |  |   |
|--|--|---|
| <input type="checkbox"/> Single family/duplex/townhome         | <input checked="" type="checkbox"/> Multi-family 4 + stories | <input checked="" type="checkbox"/> Institutional |
| <input checked="" type="checkbox"/> Multi-family 1 – 3 stories | <input checked="" type="checkbox"/> Commercial / Retail      | <input checked="" type="checkbox"/> Industrial    |

Your name	Levi Snow	Email address	lsnow@jcwrightlighting.com
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Other contact name [Click here to enter text.](#)

### **Economic Impact Data Sheet**

Briefly summarize your proposal's primary economic impacts and benefits to building owners, tenants and businesses.

Provide your best estimate of the construction cost (or cost savings) of your code change proposal? (See OFM Life Cycle Cost [Analysis tool](#) and [Instructions](#); use these [Inputs](#). **Webinars on the tool can be found [Here](#) and [Here](#)**)

\$[Click here to enter text.](#)/square foot (For residential projects, also provide \$[Click here to enter text.](#)/ dwelling unit)

Show calculations here, and list sources for costs/savings, or attach backup data pages

Provide your best estimate of the annual energy savings (or additional energy use) for your code change proposal?

[Click here to enter text.](#)KWH/ square foot (or) [Click here to enter text.](#)KBTU/ square foot

(For residential projects, also provide [Click here to enter text.](#)KWH/KBTU / dwelling unit)

Show calculations here, and list sources for energy savings estimates, or attach backup data pages

List any code enforcement time for additional plan review or inspections that your proposal will require, in hours per permit application: